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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/690,629

10/23/2003

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EXAMINER

ODOM, CURTIS B

ART UNIT

PAPER NUMBER

2611

MAIL DATE

DELIVERY MODE

11/26/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/690,629	Applicant(s) KIM ET AL.	
	Examiner CURTIS B. ODOM	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-21 is/are allowed.
- 6) ☒ Claim(s) 1,3,4,10,11,22 and 23 is/are rejected.
- 7) ☒ Claim(s) 2, 5-9, 24, and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 22, 23, and 25 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1, 3, 4, 10, and 11 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Although the claim is a method claim, a 101 process/method must be tied to another statutory class (such as a particular apparatus) or transform underlying subject matter (such as an article or materials) to a different state or thing. It is the understanding of the Examiner that limitations of the claims do not tie the claims to another statutory class since signals are non-statutory subject matter. Furthermore, the claims do not transform underlying subject matter to a different state or thing. See also MPEP 2106.IV.B.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 22 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Gitlin et al. (U. S. Patent No. 5, 056, 117).

Regarding claim 22, Gitlin et al. discloses a method for reducing distortion in a receiver (see Fig. 5) comprising:

computing a set of decision feedback equalizer (DFE) coefficients (see column 10, lines 3-25);

canceling (see Fig. 5, block 511, column 11, line 40-column 12, line 44) postcursor-inter-symbol interference (ISI) caused by a preceding symbol (prior symbol decisions) as described in column 2, lines 3-11 and column 11, lines 40-51) using the set of DFE coefficients (see column 12, lines 45-53); and

canceling precursor-ISI (see Fig. 5, block 501, column 8, lines 36-38) caused by a trailing symbol using the same set of DFE coefficients (see column 12, lines 45-53), wherein the same set of Pn coefficients are used in the feedforward section (block 519) to cancel precursor ISI and in the feedback filtering section (block 511) to cancel postcursor ISI.

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Regarding claim 23, Gitlin et al. discloses a receiver (Fig. 5), comprising:

a first feedback canceler (see Fig. 5, block 511, column 11, line 40-column 12, line 44) to cancel postcursor-inter-symbol interference (ISI) caused by a preceding symbol (prior symbol decisions) as described in column 2, lines 3-11 and column 11, lines 40-51); and

a second feedback canceler (see Fig. 5, block 501, column 8, lines 36-38) to cancel precursor ISI caused by a trailing symbol using the same set of DFE coefficients (see column 12, lines 45-53), wherein the same set of P_n (DFE) coefficients are used in the feedforward (second feedback canceler) section (block 519) to cancel precursor ISI and in the feedback filtering (first feedback canceler) section (block 511) to cancel postcursor ISI, and wherein the feedforward section is a feedback canceler in that information (E_n^1 and E_n^2) is fed back to the feedforward section (see Fig. 5, column 9, lines 3-15 and column 10, lines 21-39) to assist with cancellation of ISI.

Allowable Subject Matter

6. Claims 12-21 are allowable over prior art references.
7. Claims 2, 5-9, 24, and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CURTIS B. ODOM whose telephone number is (571)272-3046.

The examiner can normally be reached on Monday- Friday, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Curtis B. Odom/
Primary Examiner, Art Unit 2611
November 23, 2008